

CLAIMS

What is claimed is:

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1. A method, in an image scanner, for detecting a defect, comprising:
 - determining whether lines are present in image data for multiple color channels; and
 - determining whether calibration gains for photosensors corresponding to the lines are normal.
 2. A method for detecting a defect on a calibration target for an image scanner, comprising:
 - determining that a gain associated with a particular photosensor, in a particular line-array of photosensors, in a photosensor assembly, exceeds a predetermined gain threshold, the gain having been calibrated using the calibration target;
 - determining that an image intensity measurement for the particular photosensor exceeds a predetermined intensity threshold; and
 - determining that an image intensity measurement for each photosensor, physically corresponding to the particular photosensor, in all line-arrays in the photosensor assembly other than the particular line-array of photosensors, does not exceed the predetermined intensity threshold.
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3. A method for detecting a defect in image data, comprising:
determining that intensity data, from a particular photosensor, in a particular line-array of photosensors, in a photosensor assembly, is less than a predetermined intensity threshold; and
determining that intensity data, for each photosensor, physically corresponding to the particular photosensor, in all line-arrays in the photosensor assembly other than the particular line-array of photosensors, is not less than the predetermined intensity threshold.

4. The method of claim 3, further comprising:
determining that the defect was present during calibration, by determining that a gain for the particular photosensor, determined during calibration, exceeds a predetermined gain threshold.

5. The method of claim 3, further comprising:
determining that the defect was not present during calibration, by
determining that a gain for the particular photosensor, determined during calibration, does not exceed a predetermined gain threshold.

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6. A method, in an image scanner, for detecting a defect, comprising:
determining whether a line is present in image data for a first color channel;
and determining whether the line is not present in image data for a second color channel, where the spectral bandwidths of light received by photosensors for the first and second color channels are identical or nearly identical.

7. The method of claim 6, further comprising:

determining that the defect is on a calibration target when the line has an intensity that is greater than a predetermined intensity threshold.

8. The method of claim 6, further comprising:

determining that the defect was present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is greater than a predetermined gain threshold.

9. The method of claim 6, further comprising:

determining that the defect was not present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is not greater than a predetermined gain threshold.

10. A scanner, comprising:

a first line-array of photosensors;

a second line-array of photosensors;

a processor; and

the processor determining that a defect exists when lines are present in image data from only one of the first and second line-arrays of photosensors and when calibration gains, associated with photosensors corresponding to the lines, are normal.

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11. A scanner, comprising:

a calibration target;

a photosensor assembly comprising a plurality of line-arrays of
photosensors;

a processor;

a particular photosensor, in a particular line-array of photosensors, in the
photosensor assembly, having an associated gain that exceeds a
predetermined gain threshold, the gain having been calibrated using the
calibration target;

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the particular photosensor having an associated image intensity measurement
that exceeds a predetermined intensity threshold; and

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the processor determining that a defect exists when an image intensity
measurement for each photosensor physically corresponding to the particular
photosensor, in all line-arrays in the photosensor assembly other than the
particular line-array of photosensors, does not exceed the predetermined
intensity threshold.

12. A scanner, comprising:

a calibration target;

a photosensor assembly comprising a plurality of line-arrays of photosensors;

a processor;

a particular photosensor, in a particular line-array of photosensors, in a photosensor assembly, having an associated image intensity measurement that is less than a predetermined intensity threshold; and
the processor determining that a defect exists when an intensity output, for each photosensor physically corresponding to the particular photosensor, in all line-arrays in the photosensor assembly other than the particular line-array of photosensors, is not less than the predetermined intensity threshold.

13. The scanner of claim 12, further comprising:

the processor determining that the defect was present during calibration, by determining that a gain associated with the particular photosensor, determined during calibration, exceeds a predetermined gain threshold.

14. The scanner of claim 12, further comprising:

the processor determining that the defect was not present during calibration, by determining that a gain associated with the particular photosensor, determined during calibration, does not exceed a predetermined gain threshold.

15. A scanner, comprising:

a first line-array of photosensors;
a second line-array of photosensors, where the first and second line-arrays of photosensors receive spectral bandwidths of light that are substantially the same;
a processor; and
the processor determining that a defect exists when a line is present in image data for only one of the first and second line-arrays of photosensors.

16. The scanner of claim 15, further comprising:

a calibration target; and
the processor determining that the defect is on the calibration target when the line has an intensity that is greater than a predetermined intensity threshold.

17. The scanner of claim 15, further comprising:

the processor determining that the defect was present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is greater than a predetermined gain threshold.

18. The scanner of claim 15, further comprising:

the processor determining that the defect was not present during calibration when the line has an intensity that is greater than a predetermined intensity threshold and a corresponding gain is not greater than a predetermined gain threshold.